

<212> RNA

<213> Artificial Sequence

SEQUENCE LISTING

10> RANA, Tariq M. CHIU, Ya-Lin

<120> IN VIVO GENE SILENCING BY CHEMICALLY MODIFIED AND STABLE siRNA

```
<130> UMY-062
<140> 10/672069
<141> 2003-09-25
<150> 60/413529
<151> 2002-09-25
<150> 60/426982
<151> 2002-11-15
<150> 60/458051
<151> 2003-03-25
<150> 60/493095
<151> 2003-08-05
<160> 34
<170> FastSEQ for Windows Version 4.0
<210> 1
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 1
gcagcacgac uucuucaagt t
                                                                    21
<210> 2
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 2
cuugaagaag ucgugcugct t
                                                                    21
<210> 3
<211> 21
```

```
<220>
<223> siRNA target sequence
<400> 3
                                                                    21
aagcagcacg acuucuucaa g
<210> 4
<211> 21
<212> RNA
<213> Artificial Sequence
<223> siRNA target sequence
<400> 4
                                                                    21
aagugggagc gcgugaugaa c
<210> 5
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 5
gugggagcgc gugaugaact t
                                                                    21
<210> 6
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 6
                                                                    21
guucaucacg cgcucccact t
<210> 7
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<220>
<221> modified base
<222> 1
<223> 5'-aminopropyl-modified guanosine
<400> 7
gcagcacgac uucuucaagt t
                                                                    21
<210> 8
<211> 21
<212> DNA
```

```
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
<220>
<221> modified_base
<222> 1
<223> 5'-aminopropyl-modified cytidine
<400> 8
cuugaagaag ucgugcugct t
                                                                    21
<210> 9
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at position 20
<220>
<221> modified base
<222> 21
<223> 3'-Puromycin modified deoxythymidine
<400> 9
gcagcacgac uucuucaagt t
                                                                    21
<210> 10
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidine at position 20
<220>
<221> modified_base
<222> 21
<223> 3'-Puromycin-modified deoxythymidine
<400> 10
cuugaagaag ucgugcugct t
                                                                    21
<210> 11
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidine at position 20
      and 3'-Biotin-modified deoxythymidine at position
<220>
<221> modified base
<222> 21
<223> 3'-Biotin-modified deoxythymidine
```

<400> cuugaa	11 agaag ucgugcugct t	21
<210> <211> <212> <213>	23	
<220,> <223>	RNA molecule with deoxythymidines at positions 22 and 23	
<400> gcagca	12 acgac uguucuucaa gtt	23
<210><211><211><212><213>	23	
<220> <223>	RNA molecule with deoxythymidines at positions 22 and 23	
<400> cuugaa	13 agaaa cgucgugcug ctt	23
<210> <211> <212> <213>	21	
<220> <223>	RNA molecule with deoxynucleosides at positions 1-21	
<400> cuugaa	14 agaag ucgugcugct t	21
<210><211><211><212><213>	21	
<220> <223>	RNA molecule with deoxythymidines at positions 20 and 21	
<222>	modified_base 2, 3, 11, 14, 17 2'-fluoro uridine	
<222>	<pre>modified_base 1, 12, 16, 19 2'-fluoro cytidine</pre>	
<400> cuugaa	15 agaag ucgugcugct t	21

```
<210> 16
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21, deoxyadenosine at position 9 and
      deoxyguanosine at positions 10 and 13
<220>
<221> modified base
<222> 2, 3, 11, 14, 17
<223> 2'-fluoro uridine
<220>
<221> modified base
<222> 1, 12, 16, 19
<223> 2'-fluoro cytidine
<400> 16
cuugaagaag ucgugcugct t
                                                                   21
<210> 17
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21, deoxyadenosine at position 9 and
      deoxyguanosine at positions 10, 13, 15 and 18
<220>
<221> modified base
<222> 2, 3, 11, 14, 17
<223> fluoro uridine
<220>
<221> modified base
<222> 1, 12, 16, 19
<223> 2'-fluoro cytidine
<400> 17
cuugaagaag ucgugcugct t
                                                                   21
<210> 18
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21, deoxyadenosine at position 5, 6, 8, 9 and
      deoxyguanosine at positions 4, 7, 10 and 13
<220>
<221> modified_base
<222> 2, 3, 11, 14, 17
<223> 2'-fluoro uridine
```

```
<220>
<221> modified base
\langle 222 \rangle 1, 12, 1\overline{6}, 19
<223> 2'-fluoro cytidine
<400> 18
                                                                       21
cuugaagaag ucgugcugct t
<210> 19
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21, deoxyadenosine at position 5, 6, 8, 9 and
      deoxyguanosine at positions 4, 7, 10, 13, 15 and
<220>
<221> modified base
<222> 2, 3, 11, 14, 17
<223> 2'-fluoro uridine
<220>
<221> modified base
\langle 222 \rangle 1, 12, 1\overline{6}, 19
<223> 2'-fluoro cytidine
<400> 19
cuugaagaag ucgugcugct t
                                                                       21
<210> 20
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<220>
<221> modified_base
<222> 11, 12, 14, 15
<223> 2'-fluoro uridine
<220>
<221> modified_base
<222> 2, 5, 7, 10, 13, 16
<223> 2'-fluoro cytidine
<400> 20
gcagcacgac uucuucaagt t
                                                                       21
<210> 21
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
```

and 21

```
<220>
<221> modified_base
<222> 11
<223> 3-methyl uridine
<400> 21
cuugaagaag ucgugcugct t
                                                                    21
<210> 22
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<220>
<221> modified base
<222> 2, 3, 11, 14, 17
<223> 3-methyl uridine
<400> 22
cuugaagaag ucgugcugct t
                                                                    21
<210> 23
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 23
cuugaagaag ucgugcucgt t
                                                                    21
<210> 24
<211> 21
<212> DNA
<213> Artificial Sequence
<220>
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 24
ucugaagaag ucgugcugct t
                                                                    21
<210> 25
<211> 21
<212> DNA
<213> Artificial Sequence
<223> RNA molecule with deoxythymidines at positions 20
      and 21
<400> 25
```

ucccuuccug auacuagaat t 21			
<210> 26 <211> 21 <212> DNA <213> Artificial Sequence			
<220> <223> RNA molecule with deoxythymidines at positions 20 and 21			
<400> 26			
ucccuuccgu auacuagaat t	21		
<210> 27 <211> 21 <212> DNA <213> Artificial Sequence			
<220> <223> RNA molecule with deoxythymidines at positions 20 and 21			
<400> 27 ccaaagcuuc ccccuauaat t	21		
<210> 28 <211> 21 <212> DNA <213> Artificial Sequence			
<220> <223> RNA molecule with deoxythymidines at positions 20 and 21			
<400> 28 ccaaagcucu ccccuauaat t	21		
<210> 29 <211> 23 <212> DNA <213> Artificial Sequence			
<220> <223> siRNA target sequence			
<400> 29 aactgggcga gtattacatg att	23		
<210> 30 <211> 23 <212> DNA <213> Artificial Sequence			
<220> <223> siRNA target sequence			
<400> 30 aactgggcgg atattacatg att	23		
<210> 31			

<211> 21 <212> DNA <213> Artificial Sequence	
<220> <223> RNA molecule with two deoxythymidines at positions 20 and 21	
<400> 31 uuggucuccu ugaugcuuut t	21
<210> 32 <211> 21 <212> DNA <213> Artificial Sequence	
<220> <223> RNA molecule with deoxythymidines at positions 20 and 21	
<400> 32 gaaacguaga cagcgcagat t	21
<210> 33 <211> 40 <212> DNA . <213> Artificial Sequence	
<220> <223> DNA primer	
<400> 33 gcctaatacg actcactata ggacctacgg cgtgcagtgc	4 (
<210> 34 <211> 40 <212> DNA <213> Artificial Sequence	
<220> <223> DNA primer	
<400> 34 ttgatttagg tgacactata gatggtgcgc tcctggacgt	40